

A 9101

ORIGINAL

STONE & WEBSTER ENGINEERING CORPORATION

NOTED FEB 3 1955 E.S.F.

Mr. E. S. Fitz,
Virginia Electric and Power Company,
7th and Franklin Streets,
Richmond 9, Virginia.

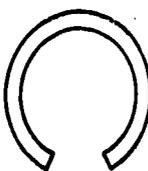
VP 1042

NOTEL FEB 4 1955 C.M.T.

12

February 1, 1955

Dr. J. E. Kasch,
American Oil Company,
122 E. 42nd Street,
New York, N. Y.



EXECUTIVE
J. E. No. 9121

J. O. 9044

Dear Dr. Kasch:

~~REFINERY GAS - VENEZUELA PLANT~~
~~VIRGINIA ELECTRIC AND POWER COMPANY~~

We are enclosing two copies of a tabulation showing the characteristics of colored coke from several sources, one of which being an analysis of coke produced from Venezuela crude oil. You telephoned us this last analysis on December 23, 1954.

The analysis of the coke produced from Venezuela crude is being used as a basis on which bids will be obtained for the steam generator equipment proposed by Virginia Electric and Power Company for installation in the vicinity of Martinsburg, Virginia. Any further information as to the analysis of coke produced from Venezuela crude would be appreciated as it becomes available so that we may transmit it to the boiler manufacturers.

The boiler specifications will state that refinery gas produced from Venezuela crude will be burned in the boilers, but we do not have an analysis of such refinery gas as yet.

We understand that the refinery will produce propane throughout the year and butane during the summer months, and we hope you can supply an analysis with and without the butane in the near future.

Yours very truly,

Enclosures

T. C. Williams,
Executive Vice President.

Copy to Mr. W. I. Dolbear
Mr. R. M. Hutcheson
Mr. E. S. Fitz

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ORIGINAL
(Rev)

J.O.No. 9303

**TABULATION OF DELAY
PROPOSED YORK
VIRGINIA ELECTRIC**

Stone & Webster Engineering Corporation

Source of Sample	Standard Oil Company (Indiana)*			
	Whiting Refinery Coke		Low Sulphur	
	Typical	Range	Typical	Range
Moisture content, wt. %	3	2-5†	5	3-6†
Dry Basis				
Volatile matter, wt. %	13	8-17	12	8-17
Ash, wt. %	0.4	0.2-0.7	0.4	0.2-
Fixed carbon, wt. %	86	85-89	87	85-8
Benzol soluble, wt. %	3.5	2.5-4.5	2.5	1-3
Sulphur, wt. %	3.75	3-5	2.25	1.5-
Vanadium, wt. %	-	-	-	-
Heating value, Btu per lb	15,500	13-16,000	15,500	13-1
Apparent density, lb per cu.ft (Density of solid coke)	52	49-56	52	49-5
Bulk density, lb per cu ft	-	-	-	-
Ultimate analysis, wt. % (one analysis)				
Nitrogen	0.4			
Sulphur	4.9			
Oxygen	1.3			
Hydrogen	4.3			
Carbon	88.9			
	99.8			

Grindability
Ash fusion temperatures, F
 Initial deformation
 Fusion
 Fluid
Particle size range

10-20% retained in 3 in. screen
Lumps usually up to 8-10 in. &
frequently to 18 in. diameter

*From Dr. J.E. Kasch's letter dated January 5, 1935. Coke from domestic crude.
†Analysis of samples by E. J.D. Ristrop of Virginia Electric and Power Co.

Debrahan sample shipped in 5 gallon can; Sample size 2 1/4" x 0".
El Dorado sample shipped in 10 gallon drum; Sample size 4" x 1/2".

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ORIGINAL
(Red)

January 19, 1955

**CHARACTERISTICS
POWER STATION
D POWER COMPANY**

Pan American Southern Corporation**
Dextrahan, La. Coke El Dorado, Ark. Coke
As Received Dry Basis As Received Dry Basis

Venezuela Crude***

5-0		9.70	
11.01	11.59	11.15	12.35
0.29	0.30	0.56	0.62
93.74	88.20	78.59	87.03
-	-	-	-
1.64	-	3.89	-
-	-	-	-
15,102	15,896	14,077	15,589
-	-	-	-
-	-	-	-

0.3-1.5**

9-12
0.5-0.8
86-89
2-3
4.2-4.6
0.2-0.25
14,500-15,500
..

10-30

Ultimate analysis of coke for metals:

Metal	Ppm
Aluminum	200
Calcium	75
Copper	4
Iron	250
Lead	80
Magnesium	95
Nickel	350
Silicon	85
Sodium	less than 400
	Possibly less than 40
Vanadium	2,100-2,500

96	63
2,075	1,860
2,555	1,965
2,620	2,085
1 1/4 in. to 0 in.	4 in. to 1/2 in.

40-50% under 3/8 in, ave., 6 in.

**Air dried, one or two days after removal from coker, (Estimated by Amoco) per telephone conversations from Dr. J.E. Kaach, Dec. 22 and 23, 1954.

+Standard Oil Co. (Indiana) advise that coke moisture content immediately after draining runs 5-10% by weight and monthly composites of coke stock piles average 2-4% moisture by weight. They estimate moisture content after 2 weeks storage will be 3-5% by weight.

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